



129S6.Cg-Tg(Camk2a-tTA)1Mmay/Jlw

Stock No: 016198 | CaMKII-tTA

 Congenic, Transgenic



CRYO RECOVERY

PLACE ORDER

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Also Known As: CaMKII-tTA

The calcium/calmodulin-dependent protein kinase II alpha (sometimes referred to as CaMKII-tTA) transgene in these mice is a "Tet-Off" system that allows inducible control over expression of genes in forebrain neurons, and may be useful in studying brain disorders such as Alzheimer's disease, Parkinson's disease, or other neurodegenerative diseases.

As described for Stock No. [007004](#), the CaMK2a-tTA transgene integrated into chromosome 12 causing a 508 Kb deletion that spans the 3' half of *Vipr2*, the entire *Wdr60*, *Esy2*, *D430020J02Rik* and *Ncapg2* loci and the first two exons of *Ptpm2*. Homozygous mice will therefore have a functional knock-out of the deleted loci, and altered or null expression of *Vipr2* and *Ptpm2*. Founder line 1 has >20 transgene copies [[Goodwin et al. 2019 Genome Res. 29:494](#)].

Donating Investigator

Jada Lewis

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GENETIC OVERVIEW

Genetic Background

Generation

Tg(Camk2a-tTA)1Mmay

Allele Type

Transgenic (Null/Knockout, Transactivator)

[VIEW GENETICS](#)

RESEARCH APPLICATIONS

Neurobiology Research

Research Tools

[VIEW ALL RESEARCH APPLICATIONS](#)

BASE PRICE

Starting at:

[\\$2,854.50 Domestic price Cryo Recovery](#)

[VIEW PRICE LIST](#)

[Details](#)

⊖ Detailed Description

CaMK2a-tTA transgenic mice express the tetracycline-controlled transactivator protein (tTA) under regulatory control of the forebrain-specific calcium-calmodulin-dependent kinase II (Camk2a) promoter. Hemizygous mice are viable and fertile. The phenotype of homozygous mice has not been characterized to date (February 2015).

As described for Stock No. [007004](#), the CaMK2a-tTA transgene integrated into chromosome 12 causing a 508.12 Kb deletion that spans the 3' half of *Vipr2* (vasoactive intestinal peptide receptor 2), the entire *Wdr60* (WD repeat domain 60), *Esyt2* (extended synaptotagmin-like protein 2), *D430020J02Rik* (RIKEN cDNA D430020J02 gene) and *Ncapg2* (non-SMC condensin II complex, subunit G2) loci and the first two exons of *Ptpm2* (protein tyrosine phosphatase, receptor type, N polypeptide 2). Homozygous mice will therefore have a functional knock-out of the deleted loci (*Wdr60*, *Esyt2*, *D430020J02Rik*, *Ncapg2*), and altered or null expression of *Vipr2* and *Ptpm2*. Founder line 1 has a copy number of greater than 20 [[Goodwin et al. 2019 Genome Res. 29:494](#)].

When hemizygotes are mated to a second strain carrying a gene of interest under the regulatory control of a tetracycline-responsive promoter element (TRE; tetO), expression of the target gene can be blocked by administration of the tetracycline analog, doxycycline (dox). These mice are a "Tet-Off" tool that allow the inducible expression of genes in forebrain neurons, and may be useful in studying brain disorders such as Alzheimer's disease, Parkinson's disease, or other neurodegenerative diseases.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

+ Development

+ Expression Data

+ Control Suggestions

+ Selected References

⊖ Genetics

+ Tg(Camk2a-tTA)1Mmay

⊖ Disease/Phenotype

+ Disease Terms

+ Research Areas By Genotype

+ Mammalian Phenotype Terms by Genotype

+ References

⊖ Technical Support

Genotyping Protocols

Standard PCR: [Tg\(Camk2a-tTA\)1Mmay](#)

Probe: [Generic tTA](#)

Standard PCR: [Generic tTA](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, hemizygous mice can be bred to wildtype (noncarrier) mice from the colony.

[Additional Breeding and Husbandry Support](#)

Citation

When using the [CaMKII \$\alpha\$ -tTA](#) mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #016198 in your Materials and Methods section.

[Facility Barrier Level Descriptions](#)

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, [G200](#)

➔ Pricing & Availability



Cryo Recovery

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

Cryorecovery - Domestic Pricing

SERVICE	GENOTYPE	PRICE
Cryo Recovery	Hemizygous or Non Carrier for Tg(Camk2a-tTA)1Mmay/	\$2,854.50

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a [Dedicated Supply](#) for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

Related Products and Services

Frozen Mouse Embryo	129S6.Cg-Tg(Camk2a-tTA)1Mmay/JlwsJ Frozen Embryos	\$2595.00
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Payment Terms and Conditions

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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